Renewable Energy Question #5: What transmission upgrade costs and back-up capacity/integration costs have Michiganders absorbed as part of the current renewable standard? Are any of those offset by other benefits of those investments?

Michigan ratepayers have not been assigned costs for renewables integration, and the transmission upgrades were approved based on analyses that the benefits would be double the costs.

The Midwest ISO has recently approved spending on a set of Multi-Value Project Transmission upgrades, the costs of which have been spread across all the ratepayers of the Midwest ISO. The benefits from the MVP Transmission are 2 times greater than the costs. The MVP Transmission portfolio provides benefits in excess of the portfolio cost under all scenarios studied. These benefits are spread throughout the system, and each zone receives benefits of at least 1.6 and up to 2.8 times the costs it incurs (MISO Transmission Expansion Plan 2011, page 1)
https://www.midwestiso.org/Library/Repository/Study/MTEP/MTEP11/MTEP11%20Report.pdf

These benefits accrue in part because Transmission provides Enhanced Market Efficiency. The complete set of Multi-Value projects greatly reduces congestion across the MISO footprint. The MVP portfolio unlocks the value in low cost energy trapped by congestion and enables more efficient usage of generation resources. Michigan has the highest bulk power prices in MISO[1], so adding transmission that reduces congestion has the greatest potential benefit to Michigan.

There are no back-up capacity costs from the RPS. The RPS purchases energy produced, rather than the fixed capacity of the plants. However, there is a capacity benefit from the wind farms that are added to meet RPS energy goals. In determining how much generator capacity is needed each year to meet resource adequacy goals, MISO counts the benefit from the wind generation. MISO tracks the amount of wind produced at the time of the MISO system's peak demand, now using 8 years of data, to find how much capacity is provided from wind. (Landfill gas generation and biomass would be recognized at higher levels of capacity.)

There is also a cost benefit to all consumers from the addition of wind power in the energy market. By adding energy supplies through the renewables standards, the several states of the Midwest have lowered overall electric prices in the wholesale market. This has been confirmed by the independent Market Monitor that watches the Midwest ISO. (2010 State Of The Market Report For The Miso Electricity Markets. June 2011. Potomac Economics)
http://www.potomaceconomics.com/uploads/midwest_reports/2010_State_of_the_Market_Report_Final.pdf

Analysis shows that the continued addition of wind power on the MISO grid will provide increasing savings on the overall price of energy in the market, and this will increase with 1) more transmission, and 2) coal plant retirements. http://www.synapse-energy.com/Downloads/SynapseReport.2012-08.EFC.MISO-T-and-Wind.11-086.pdf

[1] MISO Northern Area Study Technical Review Group (TRG) September 21, 2012 (slide 19)
https://www.midwestiso.org/Library/Repository/Meeting%20Material/Stakeholder/Planning%20Materials/Northern%20Area%20Study%20TRG/20120921%20Northern%20Area%20Study%20Presentation.pdf